

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1.-14. (Canceled).

15. (New) A fuel cell, comprising:

a separator on which a gas passage groove is formed, wherein a cross-sectional area of a gas passage being changed in a direction in which the gas passage groove extends, while each of an opening width of the gas passage groove and a depth of the gas passage groove remains substantially constant,

wherein the gas passage groove includes a curved portion which is a transition portion between a side surface of the gas passage groove and a bottom surface of the gas passage groove, and the cross-sectional area of the gas passage is changed by changing a radius of curvature of at least one curved portion.

16. (New) A fuel cell, comprising:

a separator on which a gas passage groove is formed, a cross-sectional area of a gas passage changes in a direction in which the gas passage groove extends, while each of an opening width of the gas passage groove and a depth of the gas passage groove remains substantially constant,

wherein the cross-sectional area of the gas passage being changed by changing a thickness of a surface treatment layer of the gas passage groove.

17. (New) The fuel cell according to claim 15, wherein the radius of curvature of the curve portion of the gas passage groove on a downstream side is larger than the radius of curvature of the curve portion of the gas passage groove on the upstream side.

18. (New) A fuel cell, comprising:

a metal separator including a gas passage groove being formed in the separator, the cross-sectional area of the gas passage groove changes in the direction, in which the gas passage groove

extends,

wherein the cross-sectional area of the gas passage groove being changed by changing the thickness of a surface treatment layer of the gas passage groove.

19. (New) The fuel cell according to claim 19, wherein the thickness of the surface treatment layer of the gas passage groove on a downstream side in the gas flow direction is larger than the thickness of the surface treatment layer of the gas passage groove on the upstream side in the gas flow direction.

20. (New) A method of manufacturing a separator of a fuel cell, comprising:
forming separator gas passage grooves within said separator, the cross-sectional area of the gas passage grooves changing in the extending direction, respectively, and
forming on the surface of each respective gas passage groove a surface treatment layer having a changing thickness in the longitudinal direction of each respective gas passage groove so that the cross-sectional area of each respective gas passage groove being changed in the extending direction thereof.

21. (New) The method according to claim 21, wherein the cross-sectional area of the gas passage grooves is changed such that the cross-sectional area of the gas passage grooves on the downstream side in the gas flow direction becomes smaller than the cross-sectional area of the gas passage grooves on the upstream side in the gas flow direction.

22. (New) The method according to claim 21, wherein the cross-sectional area of the gas passage grooves is formed so as to continuously decrease.

23. (New) The method according to claim 21, wherein the cross-sectional area of said gas passage grooves is formed so as to stepwise decrease.